REMARKS/ARGUMENTS

The Office Action mailed September 30, 2003 has been reviewed and carefully considered. Claims 2-3 and 8 are canceled. Claim 1 is currently amended. Claims 1 and 4-7 are pending in this application, with claim 1 being the only independent claim. Reconsideration of the above-identified application, as herein amended and in view of the following remarks, is respectfully requested.

In the Office Action mailed September 30, 2003, claims 1 and 4-7 stand rejected under 35 U.S.C. §103 as unpatentable over U.S. Patent No. 5,694,968 (Devall) in view of U. S. Patent No. 5,085,773 (Danowski).

Claims 1 and 4-7 stand rejected under 35 U.S.C. §103 as unpatentable over Devall in view of Danowski and further in view of AT 003 803 (Zeigler), FR 2 262 609 (FR '609) and WO 95/03949 (Nemser).

The present invention relates to a ventilation device for a fuel tank which having an antisurge element arranged at the entrance to a ventilation line connected to the fuel tank for allowing fuel vapors and air to pass from the fuel tank to the ventilation line and simultaneously preventing fuel which is sloshing around with in the fuel tank from passing through the antisurge element into the ventilation line (see page 7, lines 10-16 of the specification). For this purpose, the antisurge element comprises a fixed porous sintered part having a plurality of individual channels (see page 7, lines 20-22). The configuration of the channels prevents the fuel from flowing through the fixed porous sintered part and entering the ventilation line but allows gas flow therethrough to provide sufficient equalization of pressure (see page 3, lines 12-15).

Independent claim 1 has been amended to clarify that the plural channels in the fixed porous sintered part are configured to prevent the sloshed fuel from flowing completely through the

plural channels in the fixed porous sintered part. Support for this clarification is found in the specification at page 7, lines 13-16 and in Fig. 3. The specification states that the antisurge elements prevent the sloshed fuel from entering the ventilation lines and Fig. 3 shows that the only element between the fuel tank and the ventilation line is the antisurge element. Accordingly, the fuel must be prevented from flowing through the channels in the antisurge element to prevent fuel from entering the ventilation line.

It is respectfully submitted that none of the prior art of record discloses "a fixed porous sintered part having a plurality of individual channels, each of said plural individual channels having a diameter that is smaller than a diameter of said equalizing opening and having a length that is larger than the diameter of said each of said plural individual channels, wherein a configuration of said plural individual channels is operatively arranged for allowing a flow of a gas medium therethrough and producing a resistance to liquid flow which prevents sloshed fuel in the fuel tank which splashes against said antisurge element from flowing completely through said plural individual channels in said fixed porous sintered part", as recited in independent claim 1.

Devall discloses a tank venting control system having a fill limit and tank ventilation valve 10 mounted in an aperture 34 in a top wall of the tank (see col. 5, lines 40-43 of Devall). The valve 10 includes a vent apparatus 62, a perforated baffle plate 64, and an elongated tubular skirt 66 interconnecting vent apparatus 62 and baffle plate 64 (col. 6, lines 10-12). The vent apparatus 62 includes a valve housing 80 with a valve seat 114 defining a vapor inlet opening 86 therethrough (col. 6, lines 37-39). As shown in Fig. 2, the valve housing 80 is arranged within the skirt 66 in the assembled state. The valve assembly includes a float 134 to control liquid fuel and fuel vapor discharge from the fuel tank (col. 7, lines 7-11). A portion of the float, i.e., closure member 210, faces valve seat 114 and is configured to close the valve seat (col. 7, lines 35-46).

Col. 10, line 45 - col. 11, line 30 of Devall describes the operation of the float 134. This portion of Devall discloses that liquid fuel passes through the holes in the baffle plate 64 and into channel 148 within the skirt 66 (see Fig. 7 and col. 10, lines 61-67). Although the baffle plate may slow down the liquid entering the skirt 66, Devall discloses that the float is responsible for preventing liquid fuel from entering the ventilation lines.

In the Advisory Action mailed on February 12, 2004, the Examiner states that it is important to note that the antisurge element is placed on the top of the fuel tank and prevents the splashing of fuel within the fuel tank from entering the ventilation device. Applicant agrees with the Examiner's statement. However, it is respectfully submitted that antisurge device of Devall works in an entirely different way than the antisurge element recited in independent claim 1. Devall includes a float valve which opens and closes an opening to the ventilation line. When the gas tank is full, the float valve is closed as shown in Fig. 7 and described in the associated text starting at col. 10, line 61 of Devall. The float valve is in a housing comprising a skirt 66 having a top connected to the top of the fuel tank and a baffle plate 64 connected at the bottom of the skirt and closing the bottom of the skirt. Even though the antisurge element of Devall is arranged at the top of the fuel tank, Devall clearly shown in Fig. 7 that the fuel flows through the holes in baffle plate 64 and into the space defined in the skirt 66. According to the teachings of Devall, the float valve not only prevents fuel from entering the ventilation during surges, the float valve also prevents fuel from entering the ventilation line during a rollover of the vehicle in which the Devall device is arranged. Since the space defined by skirt of Devall is clearly designed to received fuel, there is no motivation in Devall itself for preventing sloshed fuel from passing through the baffle plate 64.

The Examiner further states that Danowski teach sintered plastic disks and that it would be obvious to modify the antisurge element to be a sintered part. Danowski discloses a fuel

filter having discs through which fuel flows, wherein the discs are designed to remove contaminants from the fuel by acting as strainers (see col. 2, lines 1-7). Even if the sintered discs of Danowski were combined in the baffle plate and skirt of Devall, there is no teaching or suggestion or motivation for configuring the baffle and skirt to prevent the flow of fuel there through. Danowski fails to provide any suggestion or motivation for using the discs to prevent fuel from entering a ventilation line. In contrast, Danowski discloses that the discs are designed to allow a flow of fuel therethrough.

In view of the above amendments and remarks, it is respectfully submitted that the combined teachings of Devall and Danowski fail to establish a prima facie case of obviousness with regard to the subject matter recited in independent claim 1. As stated above, fuel must pass through both the baffle plate and the float valve of Devall before entering the ventilation opening. Furthermore, since Devall teaches that the float valve is required to prevent a flow of fuel to the ventilation opening in the event of a rollover, there is no motivation in Devall for designing the channels of the baffle plate itself to prevent the flow of sloshed fuel therethrough. The only motivation for designing a passive element to prevent the flow of sloshed fuel through the channels thereof comes from impermissible hindsight using the teachings of the present invention.

Zeigler discloses a device similar to Devall with a porous body 17 which allows fuel to flow therethrough into chamber 7. This is pointed out on page 6, paragraph 2, lines 5-7 of '803. Although the material of Zeigler is a porous material, Zeigler fails to teach or suggest the flow preventing characteristics of independent claim 1. Therefore, Zeigler also fails to provide motivation for preventing a flow of fuel through the baffle plate of Devall.

Nemser discloses a membrane for organic vapors, i.e., not liquid fuel (see page 4, lines 3-11). A special cell A is required for mounting the membrane. Furthermore, the specific example IX on page 21 of Nemser discloses that the membrane is 0.033 mm thick which is not sufficient for stopping sloshing fuel.

Finally FR '609 discloses a plug 23 and does not provide a detailed disclosure of the plug. There seems to be a membrane 14 above the plug which seems to indicate that the plug 23 does not prevent fuel from flowing through.

Accordingly, there is no teaching, suggestion or motivation in the prior art of record for reconfiguring the channels in the baffle plate and skirt of Devall to prevent the flow of sloshed fuel through the channels. In view of the above amendments and remarks, it is respectfully submitted that independent claim 1 is allowable over the prior art of record.

Dependent claims 4-7, being dependent on independent claim 1, are deemed allowable for the same reasons expressed above with respect to independent claim 1.

The application is now deemed to be in condition for allowance and notice to that effect is solicited.

Respectfully submitted,

COHEN, PONTANI, LIEBERMAN & PAVANE

By _____

Thomas C. Pontani
Reg. No. 29,763
551 Fifth Avenue, Suite 1210
New York, New York 10176
(212) 687-2770

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